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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,710	02/18/2004	Nobuaki Hashimoto	118355	1715

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EXAMINER	
EVERHART, CARIDAD	
ART UNIT	**PAPER NUMBER**
2891	

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/779,710	HASHIMOTO, NOBUAKI	
	Examiner	Art Unit	
	Caridad M. Everhart	2891	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2 and 9-16* is/are rejected.

7)☒ Claim(s) *3-8* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

Claims 2, and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salatino, et al (US 5,887,343) in view of Coico, et al (US 6,278,193B1).

Salatino et al discloses a substrate including an electrode electrically connected to an integrated circuit chip(col. 3, lines 44-46, in which the substrate is the carrier) in which there are pads on the chip and on the carrier(col. 3,lines 46-48), and these are connected (col. 4,lines 55-56). There are markings on the chip(col. 3, lines 59-60, in which the indicia are the marks). The chip is provided with a transparent layer (col. 4,lines 1-6). It is also disclosed that the indicia may be provided by the circuit features, which would include the pads(col. 3,lines 63-67). The connections are solder bumps, which is another name for solder balls(col. 1, lines 21-27). There can be an external electrode to connect to the chip(col. 2,lines 25-29) in which the openings of the substrate in the dielectric can be filled with conductor. The assembly can then be attached to a circuit board(col. 1, lines 21-29). The method of forming includes the steps of providing a mark on the chip, providing an external terminal, and providing a lilght transmissive layer, as disclosed in the cited portions above.

Salatino et al is silent with respect to the substrate being semiconductor.

Coico et al is relied upon for its teaching of a semiconductor substrate for attaching the chip (col. 3, lines 1-6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the substrate taught by Salatino et al as a semiconductor substrate because the properties of the substrate would then be matched to those of the chip.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salatino et al in view of Coico et al as applied to claim 2 above, and further in view of Faris (US 6355976).

Salatino et al in view of Coico et al is silent with respect to the substrate being a chip and the dielectric being resist.

Faris teaches a stacked package of chips in which the insulation and substrates are transparent to the wavelength used in order to see the alignment marks (col. 5, lines 10-17).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the disclosure of Faris with the disclosure of Salatino et al in view of Coico et al in order to provide a thin package.

It would have been obvious to one of ordindary skill in the art at the time of the invention that resist could be used as the dielectric layer because Salatino et al teach that the dielectric can be low dielectric material through which openings are formed and conductor is filled(col. 5, lines 19-36), which would include resist, as is known to one of ordinary skill in the art.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salatino et al in view of Coico et al further in view of Faris as applied to claim 10 above, and further in view of Shin et al (US 5923966).

Salatino et al in view of Coico et al and further in view of Faris does not teach the indicia in four corners.

Shin et al teaches the markings in four corners(claim 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have formed the indicia in the corners in order to have the indicia out of the way of the device portion.

Allowable Subject Matter

Claims 3-8 ~~4-8~~ are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caridad M. Everhart whose telephone number is 571-272-1892. The examiner can normally be reached on Monday through Fridays 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, B. Baumeister can be reached on 571-272-1722. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CARIDAD EVERHART
PRIMARY EXAMINER

C. Everhart
8-7-2005